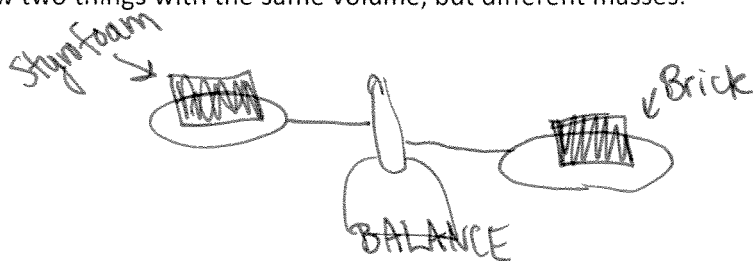


13. Draw two things with the same volume, but different masses.



LESSON 5: Density

14. The definition and formula for density are:

Density is mass per unit volume.

$$D = \frac{m}{V}$$



15. Density is an *intensive property*. What does this mean?

The property does not change depending on the size or shape of the sample. It can be used to identify a substance.
 ex Gold brick and gold ring will have same density.

16. Calculate the density of an object with a mass of 18 g and a volume of 4.5 mL.

$$d = \frac{m}{V} \quad d = \frac{18 \text{ g}}{4.5 \text{ mL}} = \boxed{4 \text{ g/mL}}$$

17. What is the volume of a metal object with a density of 11.4 g/cm³ and a mass of 17 g? Use page 19 to determine the identity of the metal.

$$V = \frac{m}{d} = \frac{17 \text{ g}}{11.4 \text{ g/cm}^3} = \boxed{1.49 \text{ cm}^3 \text{ is the volume}}$$

Density of 11.4 $\frac{\text{g}}{\text{cm}^3}$ indicates Lead

18. What is the density of a brass brick? What is the density of a brass ring?

Any brass object is 8.4 g/cm³ (Pg. 19)

LESSON 6: Chemical Names & Symbols

19. Describe the difference between an element and a compound. Provide an example of each.

Element is just one type of atom. (ex. gold or hydrogen)

Compound is 2 or more elements combined (ex. NaCl, H₂O, Al(OH)₃)

20. List the information provided by: NaNO₃(s)

- contains Na, N, and 3 O atoms
- Solid

- metal and nonmetal atoms
- ionic